[10191/1583]

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of: MICHENFELDER et al.	:	Examiner: M. Stafira
For: RAIN SENSOR	:	Art Unit: 2877
Filed: January 4, 2001	:	Confirmation No.: 9602
Serial No.: 09/673,063	:	Customer No.: 26646

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450, on

Date 1/9/06

Atty's Signature

Atty's Reg. # 41,172

DERVIS MAGISTRE
KENYON & KENYON

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF TRANSMITTAL

SIR:

Transmitted herewith for filing in the above-identified patent application, please find an Appeal Brief pursuant to 37 C.F.R. § 41.37, in triplicate.

Please charge the Appeal Brief fee of **$500.00** to the deposit account of **Kenyon & Kenyon LLP**, Deposit Account No. **11–0600**.

Appellants hereby request a three-month extension of time for submitting the Appeal Brief. The extended period for submitting the Appeal Brief expires on January 9, 2006 (January 8th being a Sunday). Please charge the **$1,020.00** extension fee and any other fee that may be required to **Kenyon & Kenyon LLP**, Deposit Account No. 11-0600. A duplicate of this Transmittal is enclosed.

The Commissioner is also authorized to charge any additional fees or credit any overpayment in connection with this paper to Deposit Account No. 11-0600.

Respectfully submitted,

KENYON & KENYON LLP

By: (Reg. No. 41,172)

Dated: 1/9/06

Gerard A. Messina
Reg. No. 35,952

One Broadway
New York, NY 10004
(212) 425-7200

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APPEAL BRIEF PURSUANT TO 37 C.F.R. § 41.37

SIR:

On August 4, 2005, Appellants submitted a Notice of Appeal from the final rejection of claims 44-65 contained in the Final Office Action issued by the U.S. Patent and Trademark Office (the "PTO") on February 9, 2005, in the above-identified patent application.

In accordance with 37 C.F.R. § 41.37, this brief is submitted in support of the appeal of the final rejection of claims 44-65. For at least the reasons set forth below, the final rejection of claims 44-65 should be reversed.

1. REAL PARTY IN INTEREST

The real party in interest in the present appeal is Robert Bosch GmbH, Postfach 30 02 20, 70442 Stuttgart, Federal Republic of Germany. Bosch is the assignee of the entire right, title, and interest in the present application.

2. RELATED APPEALS AND INTERFERENCES

There are no interferences or other appeals related to the present application.

3. STATUS OF CLAIMS

Claims 1-19 have been canceled.

Claims 20-43 and 66 have been allowed.

Claims 44-65 have been rejected and are the subject of this Appeal.

4. STATUS OF AMENDMENTS

Appellants filed a Response After Final Rejection on July 6, 2005. However, the Response did not contain any amendments.

5. SUMMARY OF THE CLAIMED SUBJECT MATTER

The rain sensor according to the present invention has in particular the advantage that only three single parts are required for its construction. (Specification, pg. 1, lines 23-28) The rain sensor is made up of a housing from which the electrical conductors for the connection to a downstream analysis unit are guided, a printed circuit board as well as a light conducting element which preferably already has all the necessary optical lens structures. As a result, a cost-effective, very compact and easily mountable rain sensor is provided. The rain sensor can be easily mounted in particular via a transparent film which is preferably self-adhesive on both sides without having an adverse effect on its optical characteristics. Moreover, the rain sensor can be manufactured with few assembly steps so that it can be produced cost-effectively in mass production. (Specification, pg. 2, lines 1-4)

The mounting of all required electronic and optoelectronic components on a common printed circuit board, preferably mounted using SMD (surface mounted device) technology, makes it possible to implement very compact sensors which in addition can be mounted in the vehicle without difficulty. Consequently, a rain sensor of this type can be designed to be significantly more compact than known rain sensors and like them, it can be mounted, for example, behind an interior rear-view mirror on the inside of the windshield. (Specification, pg. 2, lines 6-11)

In a preferred embodiment of the present invention, the light conducting element simultaneously forms the cover of the sensor housing and in this way forms a complete electronic housing with it. The connection can be secured in an advantageous manner by clipping in place. A detachable protective film on an exterior adhesive side of the transparent adhesive film simultaneously protects the light conducting element against

mechanical damage during transport. The very compact structure makes it possible for automotive manufacturers as customers of such rain sensors to perform simple and fast and consequently very cost-effective installation, which in addition can be automated without difficulty. (Specification, pg. 2, lines 13-20)

An output signal of the rain sensor according to the present invention can be advantageously used to control a windshield wiper mechanism and/or a vehicle lighting system. Thus, for example, it can be practical to switch on additional front fog lamps automatically with heavy rain or fog. (Specification, pg. 2, lines 22-25)

In a preferred embodiment of the invention, a brightness sensor for ambient light may also be integrated in addition to the rain sensor, the brightness sensor delivering a signal to a large extent influenced by daylight and accordingly having a relatively wide conical aperture that is directed upward for incident light. It is a further advantage if the brightness sensor is sensitive to ultraviolet light components such as are present in sunlight but not in artificial light. In this manner, it is possible to avoid a false tripping by intense artificial light, for example, during travel through a tunnel. (Specification, pg. 2, lines 27-33)

The incident light can be focused in an advantageous manner by the light conducting element which acts simultaneously as a base plate for the sensor housing. Such a light conducting element may, for example, be produced from a plastic such as PMMA (polymethyl methacrylate) by injection molding, it being possible to incorporate optical structures such as convergent lenses in the molding process in a simple manner. If infrared light is used for the rain sensor function, it is advantageous to produce the light conducting element from black PMMA and to provide merely the light passage for the ambient light sensor from clear plastic. This can be implemented, for example, by processing using a two-color injection method or by combining, for example, by gluing or fusing, two single-color plastic parts. (Specification, pg. 3, lines 1-9)

6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The grounds of rejection that are being appealed are as follows:

1. Claims 44-48, 51-54, 61, 64, and 65 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over United States Patent No. 5,661,303 to Teder ("Teder") in view of United States Patent No. 4,960,996 to Hochstein ("Hochstein").

2. Claims 49 and 50 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Teder in view of Hochstein and United States Patent No. 5,560,245 to Zettler et al. ("Zettler").

3. Claims 55 and 56 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Teder in view of Hochstein and United States Patent No. 4,701,613 to Watanabe et al. ("Watanabe").

4. Claim 57 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Teder in view of Hochstein and United States Patent No. 4,871,917 to O'Farrell et al. ("O'Farrell").

5. Claims 58 and 59 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Teder in view of Hochstein, O'Farrell. and United States Patent No. 5,225,669 to Hasch et al. ("Hasch").

6. Claims 60, 62, and 63 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Teder in view of Hochstein, O'Farrell, and Zettler.

7. ARGUMENTS

Regarding the Section 103(a) rejection of claims 44-48, 51-54, 61, 64, and 65 based on the combination of Teder and Hochstein,

As for the prior art rejections based on Hochstein, it must be mentioned that the design of the sensor in Hochstein in completely different from the sensor in the rejected claims. Ambient light sensor 22 is only used for correcting the values of rain sensor 20 and not for controlling the lighting devices of the motor vehicle, as in the case of the claimed invention. Since the sensor shown in Hochstein is also constructed completely differently and is only capable of detecting the ambient light in a roughly approximate manner, it is not possible to control the lighting devices by means of such a design.

In the Amendment dated February 11, 2004, Appellants argued not only that Teder does not show an ambient light sensor, but also that Teder teaches away from any modification of its rain sensor that would result in it containing such a sensor. The Examiner agreed with at least the first part of this statement, since the Examiner, in page 8 of his Examiner's Answer of October 30, 2002, acknowledged this to be true when he stated "Teder ('303) substantially teaches the claimed invention except that it does not show the at least one receiver includes at least one ambient light sensor." What the Examiner has failed to adequately address throughout the prosecution of this application is what Teder does say about ambient light, namely, that ambient light is to be excluded

from the embodiment taught in Teder. Specifically, the moisture sensor of Teder includes light barricades 82, which "may be mounted on the circuit board to exclude ambient light from the detector 58." Column 8, lines 37-39. Because of the operation of these light barricades in the sensor of Teder, one of ordinary skill in the art would recognize the futility of incorporating an ambient light sensor in a sensor into which no ambient light is permitted to enter. The Examiner completely ignores this argument. To repeat, Teder uses light barricades 82 to completely block out the entry of ambient light; if the Teder rain sensor prevents any ambient light from entering into its interior, of what use would an ambient light sensor be? If the Examiner is suggesting that one of ordinary skill in the art would have been motivated not only to place an ambient light sensor into the Teder rain sensor, but also to remove the light barricades 82 that block the entry of ambient light into the interior of the Teder rain sensor, such an assertion would be false. Teder minces no words about the undesirability of permitting ambient light into the rain sensor taught therein: "In additional [sic], light barricades 82 may be mounted on the circuit board to exclude ambient light from the detector 58 and to prevent improper optical communication or crosstalk between emitter 56 and detector 58 in the housing." Teder expressly and unequivocally states that ambient light is undesirable, yet we are to believe that one of ordinary skill in the art would ignore this teaching and proceed heedlessly to modify the Teder sensor according to the Examiner's wishes? In other words, Teder indicates that the modification proposed by the Examiner would be useless, yet the Examiner goes ahead anyway with the modification. An Examiner must consider a reference for all of its teachings, not merely those that favor his own preconceived and unsubstantiated opinion on the patentability of a claim. The Examiner's own Manual of Patent Examining Procedure teaches as much when it states that "[i]f the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teaching of the references are not sufficient to render the claims prima facie obvious." MPEP, 8th ed. (May 2004 revision) at page 2100-132. The principle of operation articulated in the passage from Teder is simple yet unmistakable: no ambient light is permitted inside the sensor. As indicated by the Examiner's very own MPEP, no valid modification of Teder may undermine this principle. In fact, not only does the proposed combination undermine this expressly articulated principle of operation, the proposed combination completely eviscerates it by directly and flatly contradicting it. No justification exists for modifying Teder in the manner proposed

by the Examiner. Therefore, based on this discussion, Appellants respectfully request withdrawal of the rejection of claim 44.

As for dependent claims 45-48, 51-54, 61, 64, and 65, Appellants submit that these claims are patentable for at least the same reasons given above. As for the other rejections that rely on additional references, since none of these references overcomes the deficiencies noted above, Appellants submit that claims 49, 50, 55-60, 62, and 63 are patentable for the same reasons given above as well.

8. CONCLUSION

For at least the reasons indicated above, Appellants respectfully submit that the art of record does not teach or suggest Appellants' invention as recited in the claims of the above-identified application. Accordingly, it is respectfully submitted that the invention recited in the claims of the present application is new, non-obvious and useful. Reversal of the Examiner's rejections of the claims is therefore respectfully requested.

Respectfully submitted,

KENYON & KENYON LLP

Dated: 1/9/06

By: _____

Gerard A. Messina
Reg. No. 35,952

One Broadway
New York, NY 10004
(212) 425-7200

CLAIMS APPENDIX

44. A rain sensor arranged with respect to a measuring distance in which is arranged a windshield, comprising:

a housing;

a light conducting element for joining to the housing; and

a plurality of optical and electronic components mounted in the housing and including:

at least one transmitter for transmitting an electromagnetic wave,

at least one ambient light sensor that is sensitive to visible light, and

at least one receiver for receiving the electromagnetic wave, the measuring distance influencing a wave propagation between the at least one transmitter and the at least one receiver such that when a coating forms on the windshield, an output signal sensed by the at least one receiver is changed.

45. The rain sensor according to claim 44, wherein:

the rain sensor is used in a motor vehicle.

46. The rain sensor according to claim 44, wherein:

the coating is a result of wetting by precipitation.

47. The rain sensor according to claim 44, wherein:

the light conducting element forms a base plate of the housing and includes a broad area of connection with the windshield.

48. The rain sensor according to claim 47, further comprising:

a common printed circuit board on which is mounted the plurality of optical and electronic components in accordance with SMD technology.

49. The rain sensor according to claim 48, further comprising:

an integrated connector for an electrical connection to a downstream analysis unit, wherein:

the housing corresponds to a rectangular-shaped sensor housing.

50. The rain sensor according to claim 49, further comprising:

contact pins through which the common printed circuit board is connected to the integrated connector.

51. The rain sensor according to claim 44, wherein:

the rain sensor is cemented to an inside of the windshield.

52. The rain sensor according to claim 51, further comprising:

a transparent film that is self-adhesive on each side thereof and corresponds to a connection between the windshield and the light conducting element.

53. The rain sensor according to claim 44, wherein:

the output signal is provided to a downstream analysis circuit and includes information with respect to an instantaneous degree of wetting of the windshield.

54. The rain sensor according to claim 53, wherein:

at least one of a windshield wiper mechanism and a vehicle lighting system is activated as a function of the output signal.

55. The rain sensor according to claim 44, wherein:

the at least one transmitter includes at least one LED.

56. The rain sensor according to claim 55, wherein:

a first one of the at least one receiver that detects an optical signal emitted by the at least one LED includes a photodiode.

57. The rain sensor according to claim 44, wherein:

the at least one ambient light sensor includes an aperture angle of approximately 40° inclined upward with an aperture direction in a direction of travel.

58. The rain sensor according to claim 44, wherein:

the at least one ambient light sensor is sensitive to an ultraviolet light.

59. The rain sensor according to claim 58, wherein:

the ultraviolet light corresponds to sunlight.

60. The rain sensor according to claim 44, wherein:

where an infrared light is used, the light conducting element is formed of a black plastic.

61. The rain sensor according to claim 44, wherein:

the light conducting element includes optical areas formed from transparent plastic for the at least one receiver.

62. The rain sensor according to claim 44, wherein:

the light conducting element includes a plastic part formed according to a two-color injection molding process.

63. The rain sensor according claim 44, wherein:

the light conducting element is formed by combining two single-color plastics.

64. The rain sensor according to claim 44, wherein:

the light conducting element includes integrated lens structures for light bundling.

65. The rain sensor according to claim 44, wherein:

the light conducting element forms a cover of the housing.